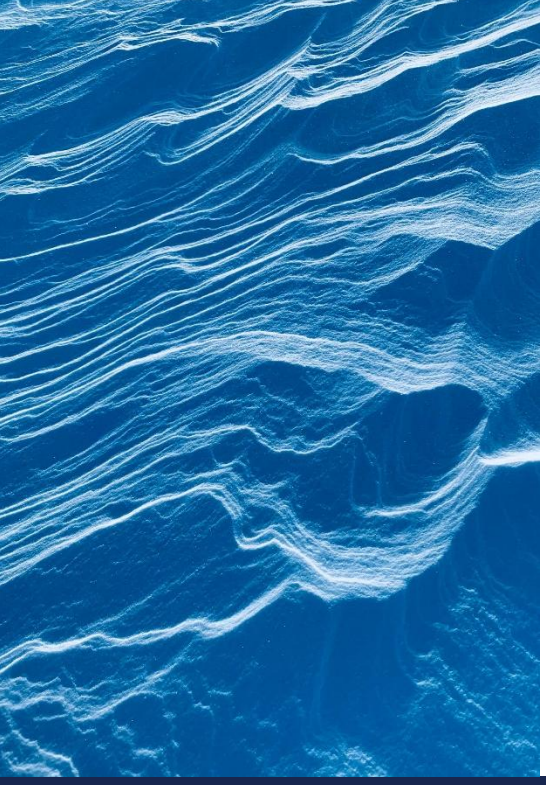

Flood Evacuation Plan

AEG8963_BN11_WestSussex_01

Site Address: 131 Newland Road
Worthing
West Sussex
BN11 1LB

aegaea
Flood risk, water and environment

UK Experts in Flood Modelling, Flood Risk Assessments, and Surface Water Drainage Strategies

aegaea
Flood risk, water and environment

Document Issue Record

Project: Flood Evacuation Plan

Prepared for: Tony Lazarus

Reference: AEG8963_BN11_WestSussex_01

Site Location: 131 Newland Road, Worthing, West Sussex, BN11 1LB

Issue	Date	Author	Check	Auth.	Comments
1	19/09/2025	Mace Latham	JC	OH	First issue

Please Note:

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Flood risk, water and environment

1. Introduction

1.1. Aegaea were commissioned by Tony Lazarus to undertake a Flood Evacuation Plan (FEP) for the application for Prior Approval for the proposed development. This FEP has been prepared in accordance with the requirements set out in the National Planning Policy Framework (NPPF) and the associated Planning Practice Guidance.

1.2. It is understood that the client has consulted WSP and have responded (on behalf of the Local Planning Authority – LPA) with the following (reference: NOTICE/0012/25):

> *Surface water flooding typically occurs with little advance notice and develops rapidly; therefore, **we would recommend the application is not approved** until an emergency plan is received demonstrating safe access and egress route for the proposed development.*

1.3. Therefore, the client has instructed Aegaea to undertake an FEP for the proposed development.

Site Overview

1.4. The site of the proposed development is 131 Newland Road, Worthing, West Sussex, BN11 1LB (Figure 1).

1.5. It is understood that the proposed development is for the change of use of the ground floor from Commercial (Class E) to Residential (Class C3) to provide additional floorspace for the first floor flat. It is noted that the flats will be connected to the ground floor level to allow for safe refuge at the first flood if required.

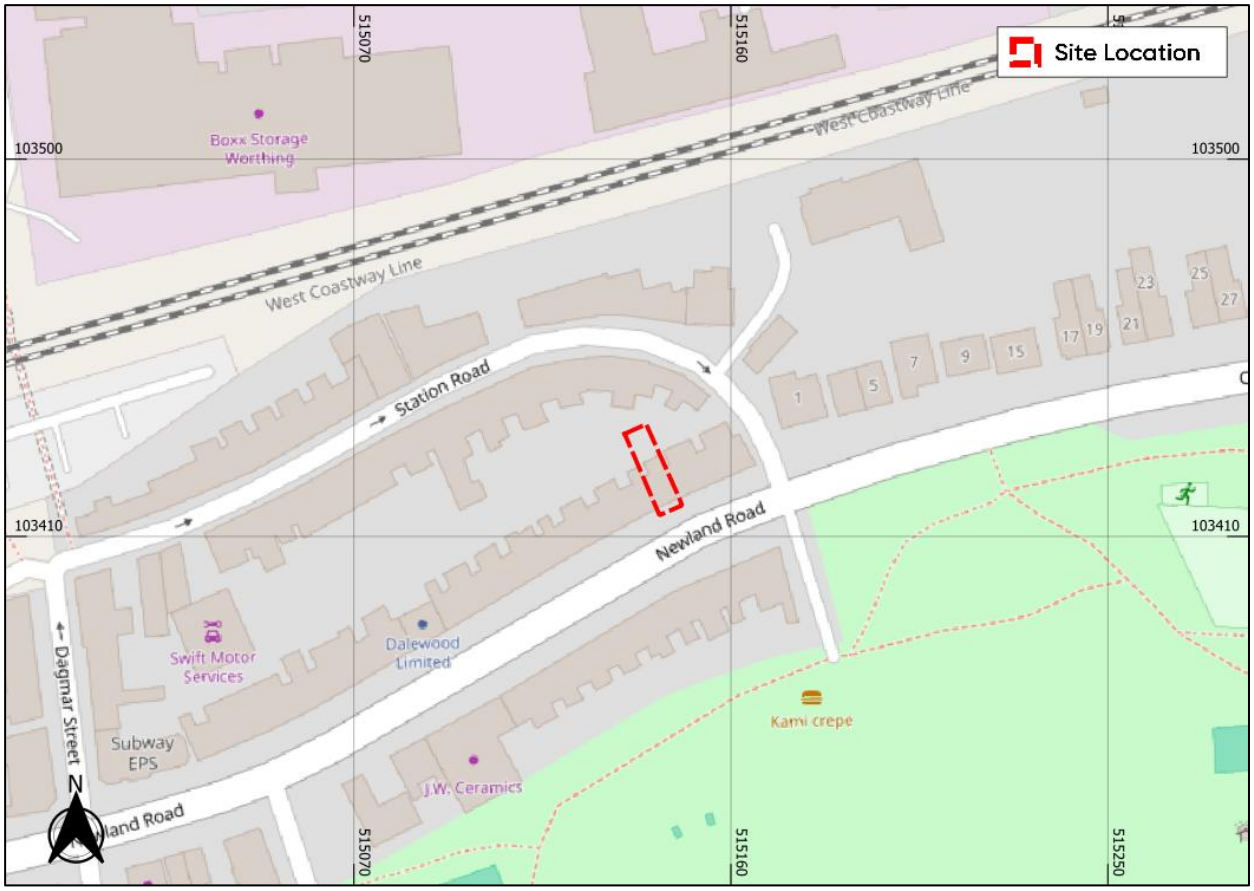

Figure 1: Site Location (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors)

2. Flood Risk Summary

What is the Risk?

2.1. Given that WSP (on behalf of the LPA) have requested a FEP with regards to surface water, a pluvial / surface water flood risk summary is provided below.

RoFSW Data Analysis

2.2. The National Flood Risk Assessment (NaFRA2), published in January 2025, has updated the Risks of Flooding from Surface Water (RoFSW) products which shows the chance of flooding from surface water to areas of land.

2.3. The RoFSW products are an assessment of where surface water flooding may occur when rainwater foes not drain away through the normal drainage systems or soak into the ground but lies on or flows over the ground instead. It includes information about flooding extents and depths including the potential impact of climate change on flood risk, based on the latest UK Climate Projections (UKCP18).

2.4. Risk is displayed as one of three likelihood categories:

- High – greater than or equal to 1 in 30 (3.3%) chance of flooding in any year.
- Medium – less than 1 in 30 (3.3%) but greater than or equal to 1 in 100 (1%) chance of flooding in any given year.
- Low – less than 1 in 100 (1%) but greater than or equal to 1 in 1000 (0.1%) chance of flooding in any given year.

2.5. The RoFSW depth mapping shows the annual chance of flooding (based on the three risk categories listed above) **beyond a specific depth**, for depths at the following intervals from 20cm to 120cm (0.2m, 0.3m, 0.6m, 0.9m and 1.2m).

2.6. As well as present day risk of flooding from surface water, climate change scenarios have been produced to indicate the predicted impacts of climate change on future flood risk. The climate change allowances are based on the latest UK Climate Projections (UKCP18) from the Met Office, using the Representative Concentration Pathway (RCP) 8.5. A near-term epoch (2040 – 2060 "2050s" epoch) and central allowances are being used initially, to support short and medium-term decisions informed by the highest flood likelihood projections.

2.7. Given this is a surface water flood risk summary for a FEP, the climate change scenario has been assessed as a 'worst-case' scenario.

Climate Change Scenario

2.8. The online 'Flood Risk from Surface water – Climate Change' mapping indicates that the majority of the site, including the existing building and therefore the proposed development, is at high risk of experiencing surface water flooding when considering the effects of climate change (Figure 2).

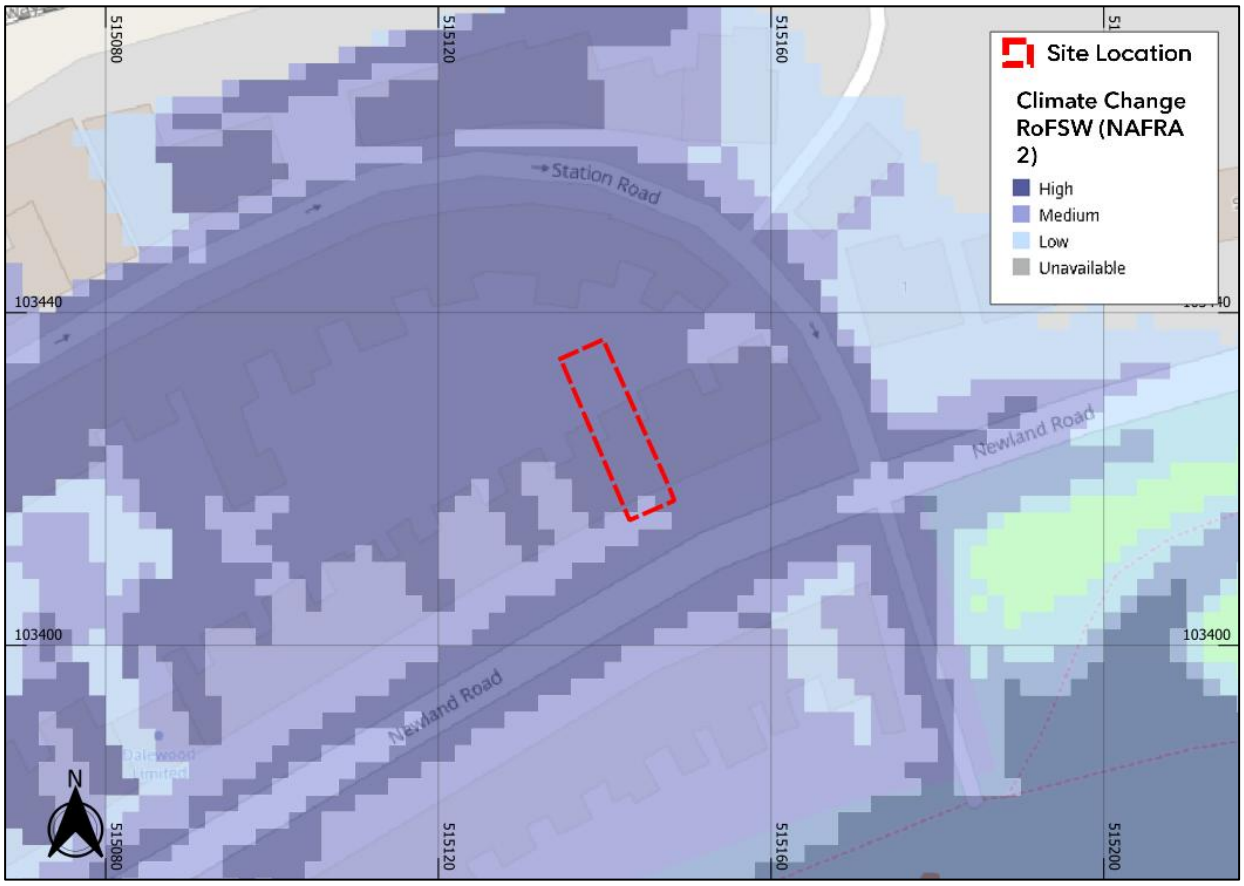

Figure 2: EA Climate Change Surface Water Flood Risk Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

2.9. Analysis of the likelihood of flood depths exceeding 0.2m mapping shows that the existing building / proposed development is at medium risk with the rear garden at high risk. The remaining areas confined to the front area of the building is at low risk (Figure 3).

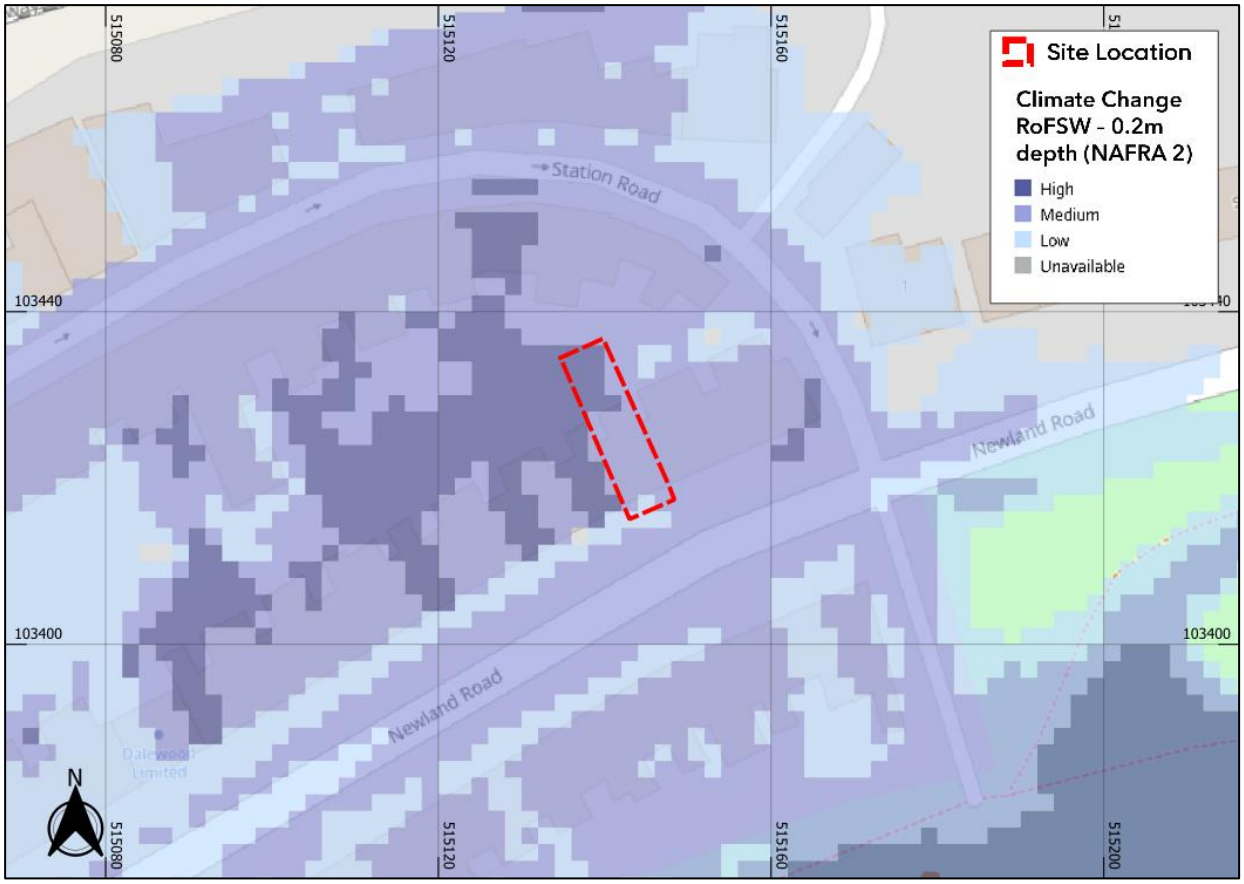

Figure 3: EA RoFSW Mapping of Likelihood of Flood Depths >0.2m (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

2.10. Analysis of the likelihood of flood depths exceeding 0.3m mapping indicates that the south half of the site is at low risk with the remaining areas to the north (rear garden) at medium risk of flood depths exceeding 0.3m (Figure 4).

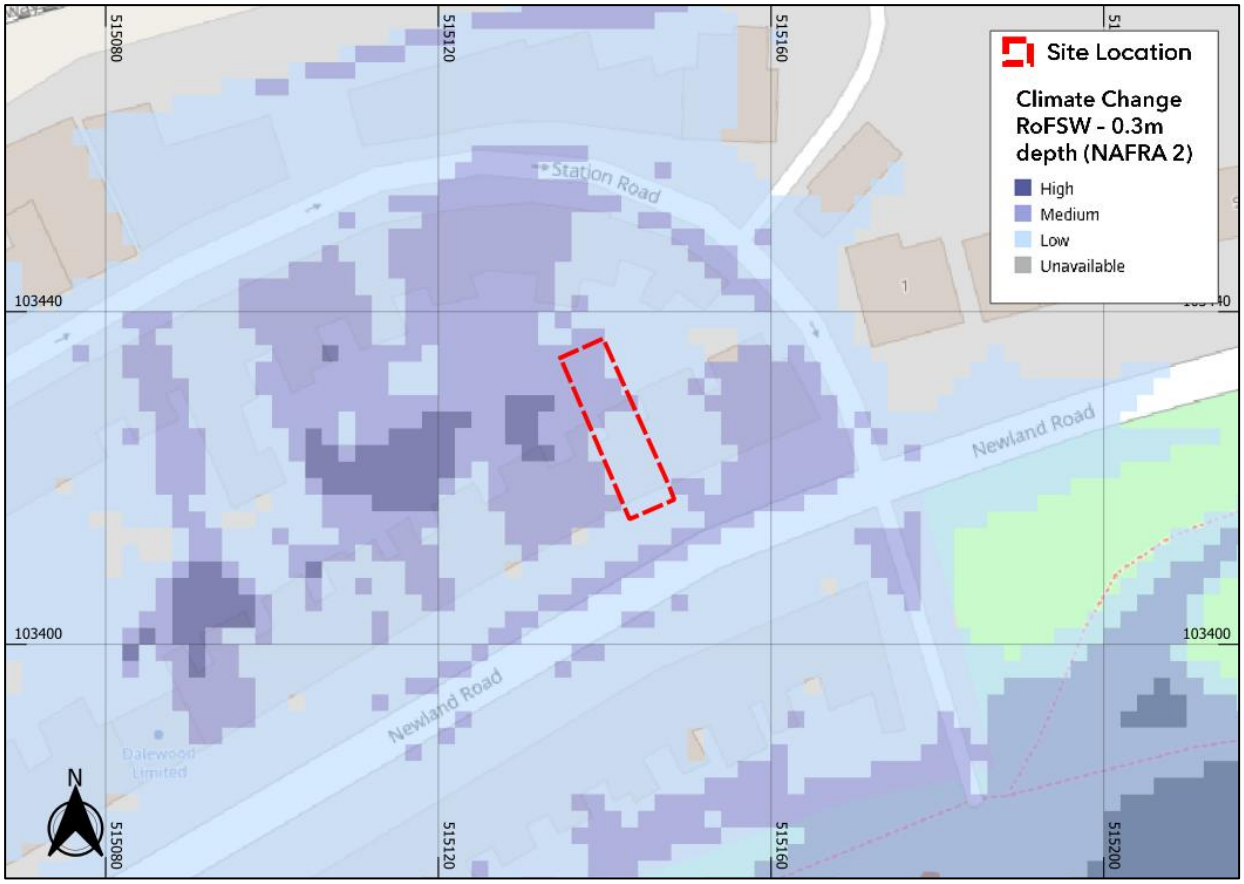

Figure 4: EA RoFSW Mapping of Likelihood of Flood Depths >0.3m (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

2.11. Analysis of the likelihood of flood depths exceeding 0.6m mapping indicates that the south half of the site is outside the modelled low, medium and high likelihood extents with the remaining areas to the north (rear garden) at low risk of flood depths exceeding 0.6m (Figure 5).

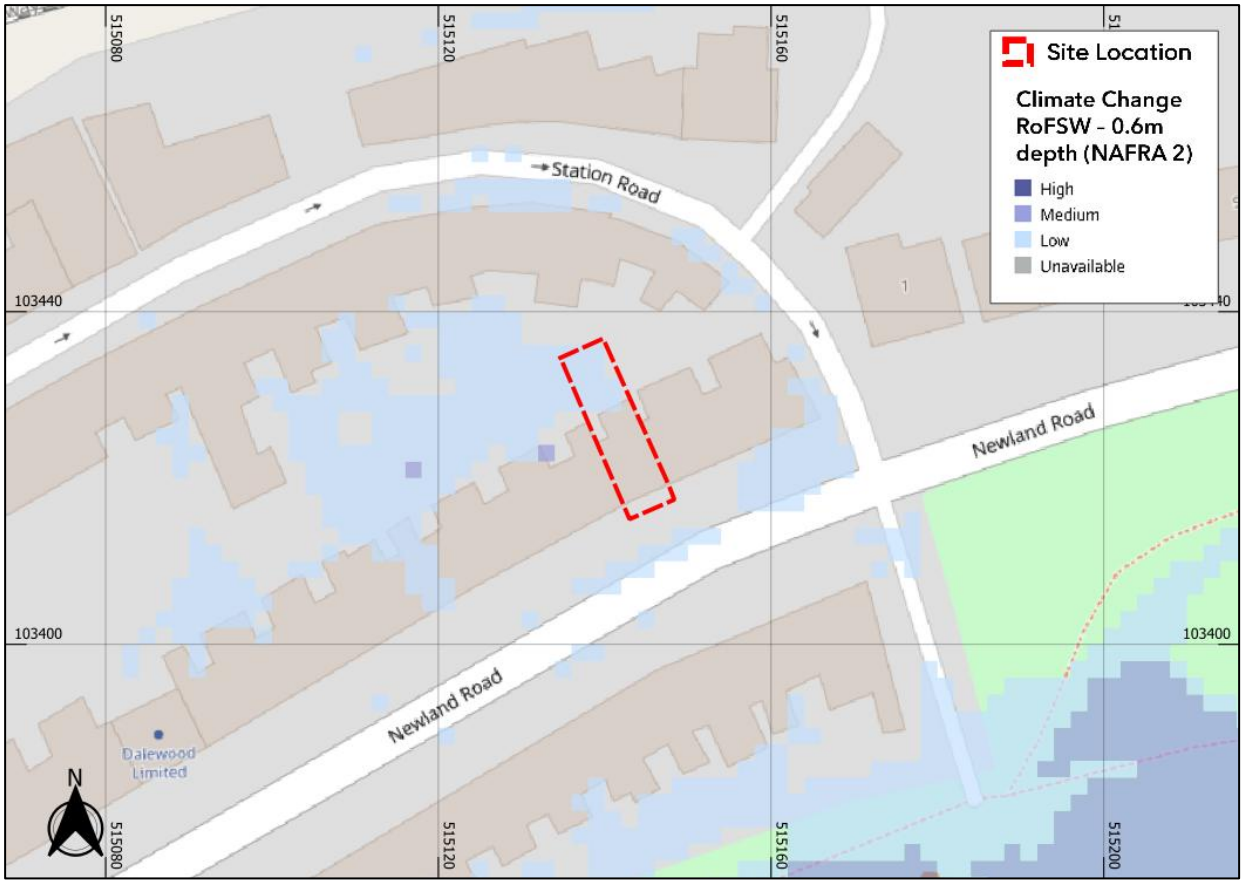

Figure 5: EA RoFSW Mapping of Likelihood of Flood Depths >0.6m (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

2.12. Review of the remaining flood depth intervals (0.9m and 1.2m) shows that the entirety of the site is outside the low, medium and high likelihood categories of experiencing flood depths greater than 0.9m when considering the effects of climate change.

Pluvial Flood Risk Summary

2.13. In summary, given the existing building / proposed development is at low risk of flood depths exceeding 0.3m and is not within the low, medium and high likelihood extents when reviewing the 0.6m flood depth interval, the pluvial flood risk is considered to be low to moderate.

2.14. It is noted that Newland Road, directly adjacent to the south of the site, is at medium risk of flood depths exceeding 0.2m and at low and medium risk of flood depths exceeding 0.3m.

2.15. As such, there is a risk of surface water (pluvial) flooding to the site and this FEP will demonstrate how occupants of the site can remain safe before, during, and after a flood event.

Safe Access/Egress

2.16. The risk to the access route from surface water sources has been assessed using the best available data. It is noted that the NaFRA2 data does not include any hazard data; therefore, the RoFSW flood depth likelihood mapping has been assessed.

2.17. The requirements for safe access and exit from new developments in flood risk areas are as follows, in decreasing order of preference:

- Safe dry route for people and vehicles;
- Safe dry route for people;
- If a dry route for people is not possible, a route for people where the flood hazard (in terms of depth and velocity of flooding) is low and should not cause a risk to people; then,
- If a dry route for vehicles is not possible, a route for vehicles where the flood hazard (in terms of depth and velocity of flooding) is low to permit access for emergency vehicles. However, the public should not drive vehicles in floodwater.

2.18. Where a dry route is not possible and a route with low flood hazard is identified, the route should not have any service covers that could be removed, or other underwater hazards. It is often difficult to see underwater hazards even in shallow water, particularly at night or if the water is silty.

Pluvial Risk

2.19. As previously mentioned, the RoFSW mapping includes the climate change data, based on the latest UK Climate Projections (UKCP18). Therefore, the data can be used to should the access route now and in the future.

2.20. The RoFSW mapping does not include Hazard data. As such, the depth data has been assessed in conjunction with the FD2320[1] Hazard Rating Table.

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[1] **https://assets.publishing.service.gov.uk/media/602d04a98fa8f5037d371a08/FLOOD_HAZARD_RATINGS_AND_THRESHOLDS_explanatory_note.pdf**

2.21. As can be seen in Figure 6, the entirety of the site is at low and medium risk with the surrounding roads also at low and medium risk and therefore a safe access/egress route has been identified.

2.22. Interrogation shows that flood depths along the evacuation route on Newland Road are at low risk of exceeding 0.3m even when considering climate change. The modelled surface water surrounding the site is considered to be ponding, meaning the velocity of the flood water can also be considered low.

2.23. However, it is noted that when crossing the area of medium risk directly adjacent to the building, occupants are encouraged to remain on paved areas when travelling east along Newland Road, which are higher than roads and therefore will observe less flooding.

2.24. When assessing flood depths >0.3m, in the surrounding area, these are considered to be limited to areas of ponding rather than flood flow routes. Therefore, the primary mechanism of flooding would likely be slow moving or standing water. Based on FD2320, flood depths under 0.25m and a velocity up to 0.3m/s are generally considered 'low hazard'.

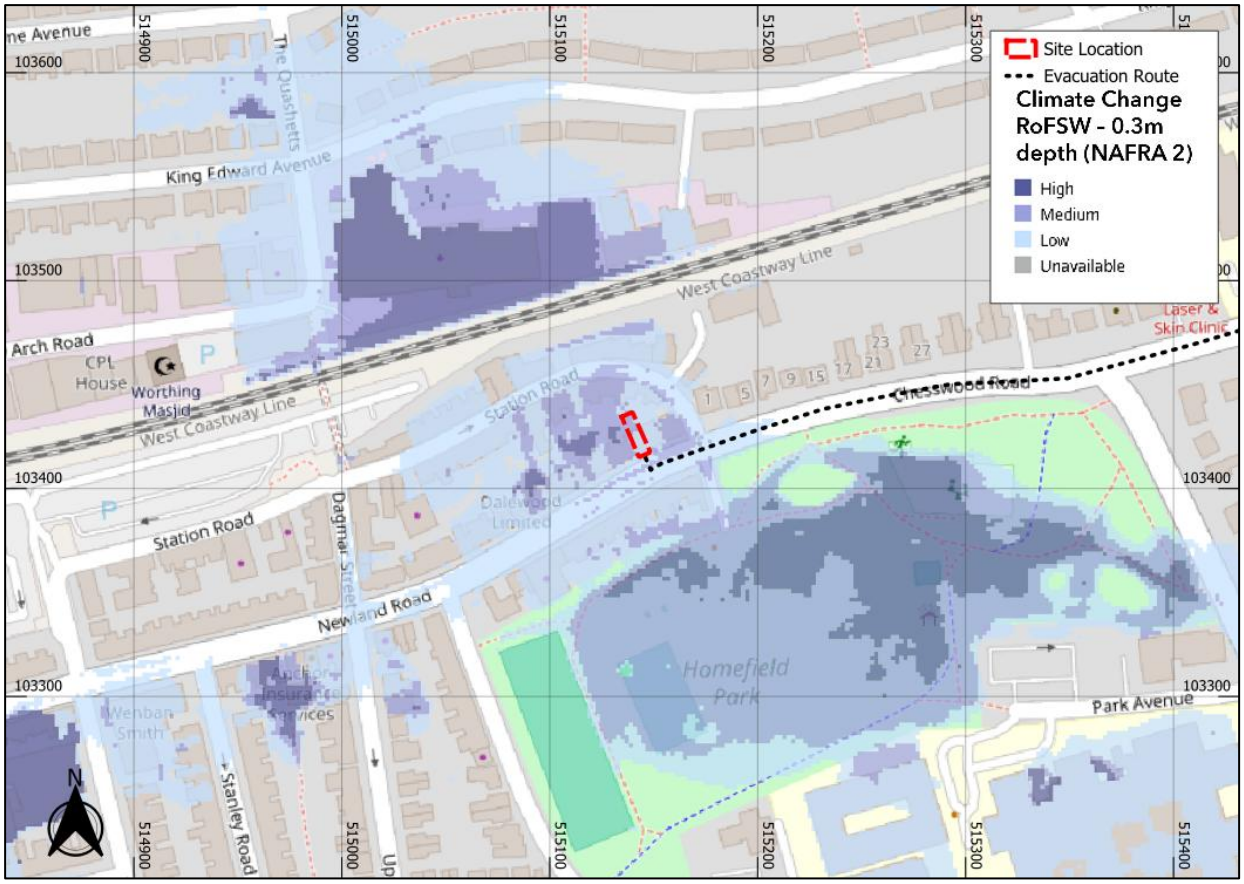

Figure 6: Evacuation Route Overlain with EA RoFSW Mapping of Likelihood of Flood Depths >0.3m (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

3. Flood Evacuation Plan (FEP)

Summary

3.1. Given the modelled flood risk to the site and surrounding area, prior evacuation of the site is recommended to reduce the risk to life of residents but also reduce the strain on the emergency services. Residents are also encouraged to stay at the upper floor or above if necessary.

3.2. This section therefore sets out the trigger events for implementing the FEP, who is responsible for what actions, and what procedures should be followed prior, during and after a flood event.

Met Office Weather Warnings

3.3. Met Office is the national meteorological service for the UK; they issue weather warnings up to 5 days in advance, through the National Severe Weather Warning Service, when severe weather has the potential to bring impacts to the UK. It is also possible to stay up to date with weather warnings through the Met Office app (available on both android and apple), social media (X (formerly Twitter), Facebook) or email alerts.

3.4. During periods of bad weather, residents should monitor local weather reports and sign up for the Met Office UK weather warnings[2]. Procedures should be formalised (if not done so already) in the event of a severe weather warning or flooding.

Trigger Events

3.5. Met Office weather warnings[3] should be used to set evacuation triggers. There are three levels of flood warning:

- Met Office 'yellow' warning - To implement a review of the FEP procedures.
- Met Office 'amber' warning - Amber alert (state of readiness)

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[2] **https://service.govdelivery.com/accounts/UKMETOFFICE/subscriber/new**

[3] **https://www.metoffice.gov.uk/weather/warnings-and-advice/seasonal-advice/when-and-why-do-we-issue-warnings**

- Met Office 'red' warning - Issue a red alert (site evacuation)

3.6. The Met Office issues weather warnings, through the National Severe Weather Warning Service, when severe weather has the potential to bring impacts to the UK. These warnings are given a colour (yellow, amber or red) depending on a combination of both the impact the weather may have and the likelihood of those impacts occurring[4]:

- **Yellow:** You should check the details of the forecast and consider taking steps to minimise impacts for you and your household. Even in a yellow warning area, people will see disruption to a greater or lesser extent, so it's important to check the details and see which steps you could take to prepare.
- **Amber:** Disruption from an Amber warning is more likely and more widespread. You should change plans that could be impacted by the weather and take action to protect yourself and your property.
- **Red:** These warnings are reserved for very dangerous weather with a high level of certainty. You should take direct action to keep yourself and others safe from impacts of the weather. It's likely there will be a risk to life, as well as substantial disruption to travel and infrastructure.

3.7. Three trigger stages have been identified, namely, yellow alert (to implement a review of the FEP procedures), place residents/occupants on amber alert (state of readiness) or issue a red alert (site evacuation), as detailed in Table 1.

3.8. To facilitate the implementation of the FEP, it may be necessary to situate signs, lights and / or real-time information boards around the site as prompts during a flood emergency or to direct residents towards the appropriate evacuation route.

[4] **https://www.metoffice.gov.uk/weather/guides/warnings**

Table 1: Evacuation Triggers and Procedures

Warning trigger	Trigger stage	Procedures
Met Office Yellow Warning *You should check the details of the forecast and consider taking steps to minimise impacts for you and the property.*	Yellow Alert - Review FEP	**Yellow Alert represents a state of readiness ahead of a potential flood situation.** • Check your flood risk: https://www.metoffice.gov.uk/weather/warnings-and-advice/uk-warnings • Keep up to date with the latest situation – Download the Met Office Weather Forecast App, subscribe to email alerts or follow @metoffice and #WeatherAware on X (formerly Twitter) for the latest weather warning updates. • Have a bag ready with vital items like insurance documents and medications in case you need to leave your home. • Check you know how to turn off your gas, electricity and water mains supplies. • Plan how you'll move family and pets to safety
Met Office Amber Warning *You should change plans that could be impacted by the weather and take action to protect yourself and your property.*	Amber Alert	**Amber Alert means you should be prepared to act, if necessary, ahead of a potential flood situation.** • Move vehicles to higher ground if it's safe to do so. • Secure any materials or large loose items that may float and cause damage during a flood. • Move family and pets to safety. • Turn off gas, electricity and water supplies if it's safe to do so (never touch an electrical switch if you're standing in water)

Warning trigger	Trigger stage	Procedures
Met Office Red Warning *You should take direct action to keep yourself and others safe from impacts of the weather. It's likely there will be a risk to life, as well as substantial disruption to travel and infrastructure*	Red Alert	**Red Alert means that you must act.** • Call 999 if you're in immediate danger. • Follow advice from the emergency services and evacuate if you're told to do so. • Avoid driving or walking through flood water: just 30cm (1 foot) of fast flowing water could move your car and even shallow moving water can knock you off your feet. It may also contain heavy debris, sharp objects, open manhole covers, sewage and chemicals. • Make sure you have an emergency kit including a torch, spare batteries, mobile phone and charger, warm clothes, important numbers like your home insurance, water, food, first aid kit and any medicines and baby care items you may need. • Buildings should not be re-entered until flood warning has been lifted or unless instructed by emergency services.

Responsibilities

3.9. It is the responsibility of the individual property owners to make the FEP procedures available and communicated to any occupants where appropriate. Where properties are rented, all tenants should have access/means to receive Flood Warnings from the Met Office (via X, the Met Office App or Email Alerts).

3.10. It is the responsibility of the individual residents to implement the FEP at the trigger event of receiving a Met Office Warning.

3.11. Where possible, residents should seek to coordinate their evacuation with other residents. This is to keep as many people evacuating the area to Flood Zone 1 or outside of modelled surface water extents together as possible. Additional strain would be placed on the emergency services if multiple smaller groups of people were trying to evacuate the property and became stranded.

Preparation for Flood Events

3.12. There are a multitude of ways that occupants/site owners can prepare for the potential of a flood event. These are set out as follows:

- Important documents (such as passports and insurance certificates) can be placed into sealable polythene bags to protect them from flood water or can be placed in a high and secure location.
- Ensure that the insurance policy for the property covers for flood damage.
- Monitor Met Office Weather Warnings via app, social media, email.
- Identify who can assist during a flood event – friends or family that can help you store possessions and stay somewhere safe when flooding is imminent. Similarly, you can look out for friends, neighbours and family who may need help themselves during a flood event.
- If there are pets within the residence, identify somewhere safe they can be taken during a flood event.
- If there are cars within the residents, identify somewhere safe they can be moved prior to a flood event. Do not attempt to move your car if it is already in flood water. Lock House and parking is located within Flood Zone 1.

3.13. In addition, it is advised you prepare a flood kit which can be quickly accessed when flooding is imminent to equip you with everything you may need. You should consider the following:

- Important documents such as passports and insurance certificates – if these cannot be safely stored within the property it would be advised to take them with you as they are expensive to replace.
- Torch – In the case that it floods at night and power is affected (Wind Up torch is preferred)
- Radio – A wind up or battery radio will help to monitor local news and weather broadcasts for the latest flooding situation.
- Batteries – Have spare batteries in order to power the torch and radio should it be required.
- Bottled Water – Water from the tap could become contaminated during a flood so bottled water should be available.
- First Aid Kit – Keep a first aid kit to hand in case of minor injuries. Put any prescription medication in your kit so that you can have easy access to it.

- Mobile Phone – Keep a fully charged mobile with you so that you can contact people in an emergency or call for help. If the phone has internet access you can use it to monitor the local news and latest flood situation.
- Waterproof Clothing – Keep wellies and rubber gloves available should you need to enter the flood water.
- Non-Perishable or Tinned Food

3.14. In the event of a flood, you may not be able to find these essential items, so it is important to prepare in advance. Completing an individual flood plan (using the information provided within this document) will assist in helping you decide what practical actions to take before and during a flood which will help reduce the damage flooding could cause).

What to Do to Prepare/ During Flooding

3.15. This FEP should be communicated to and provided to all property owners and/or tenants. The summary (Section 4) should be displayed in communal areas (i.e. hallway) and be made easily available.

3.16. The main priority during a flooding event is the safety of all occupants. As such a key part of protecting everyone is making sure that you are fully aware of the ongoing situation and know where to access the most up to date information. Below is a list of advised actions that should be carried out during a flood event:

- Where possible, switch off all electrical and gas appliances at the mains. Do not turn on your electrical or gas supplies until they have been checked by a professionally qualified electrician or engineer. Take care of gas leaks – do not smoke or use open flames.
- Monitor websites distributing flooding information including https://www.metoffice.gov.uk/weather/warnings-and-advice/uk-warnings
- Monitor the Met Office App, X (formerly Twitter), local press, radio, and regional TV.
- Pay close attention to the advice given by emergency services and local authority. Take all of the warnings seriously and respond quickly.
- Do not drive through flood water. Less than two feet of flood water can be enough to float a vehicle.

- Avoid contact with flood water when possible. Flood water is typically contaminated with sewage and other hazardous substance. Wear rubber gloves and boots and wash thoroughly if you do come into contact with flood water. Do not attempt to swim through flood water.
- Do not enter a property that has been flooded unless you are sure if is structurally safe. If in doubt, have the property checked by a professional.
- Do not turn on your electrical or gas supplies until they have been checked by a professionally qualified electrician or engineer. Take care of gas leaks – do not smoke or use open flames.
- Do not use petrol or diesel generators indoors as they produce carbon monoxide.

On Site Safe Refuge

3.17. If flooding has already occurred along the proposed evacuation route it may not be safe for evacuees to enter flood water.

3.18. Residents have access to the first floor, which is above all modelled flood depths based on the NaFRA2 data. Thus, safe refuge within the first floor of the property can be undertaken in a last case scenario.

3.19. **However, it is extremely important to note that prior evacuation should be sought before flooding occurs.**

3.20. **Do not wait for flooding to occur to react. It should be reiterated that prior evacuation is the preferred option and safe refuge on site should only be sought in the very worst case scenario where flooding occurred, and the refuge on site is to mitigate the risk to life.**

4. Summary for Site Occupants

Property:	131 Newland Road, Worthing, West Sussex, BN11 1LB
Risk summary:	During the modelled likelihood of surface water flood depths exceeding 0.3m, the site and areas along Newland Road are shown to be at low to medium risk. However, prior evacuation of the site should be sought as soon as a weather warning is forecasted by the Met Office.

Preparedness:

- Prepare a flood kit (first aid, medication, torch, warm clothes, wellington boots, long-life food)
- Make a list of emergency contacts and consider alternative options for accommodation.
- Review FEP periodically
- Monitor Met Office Weather Warnings

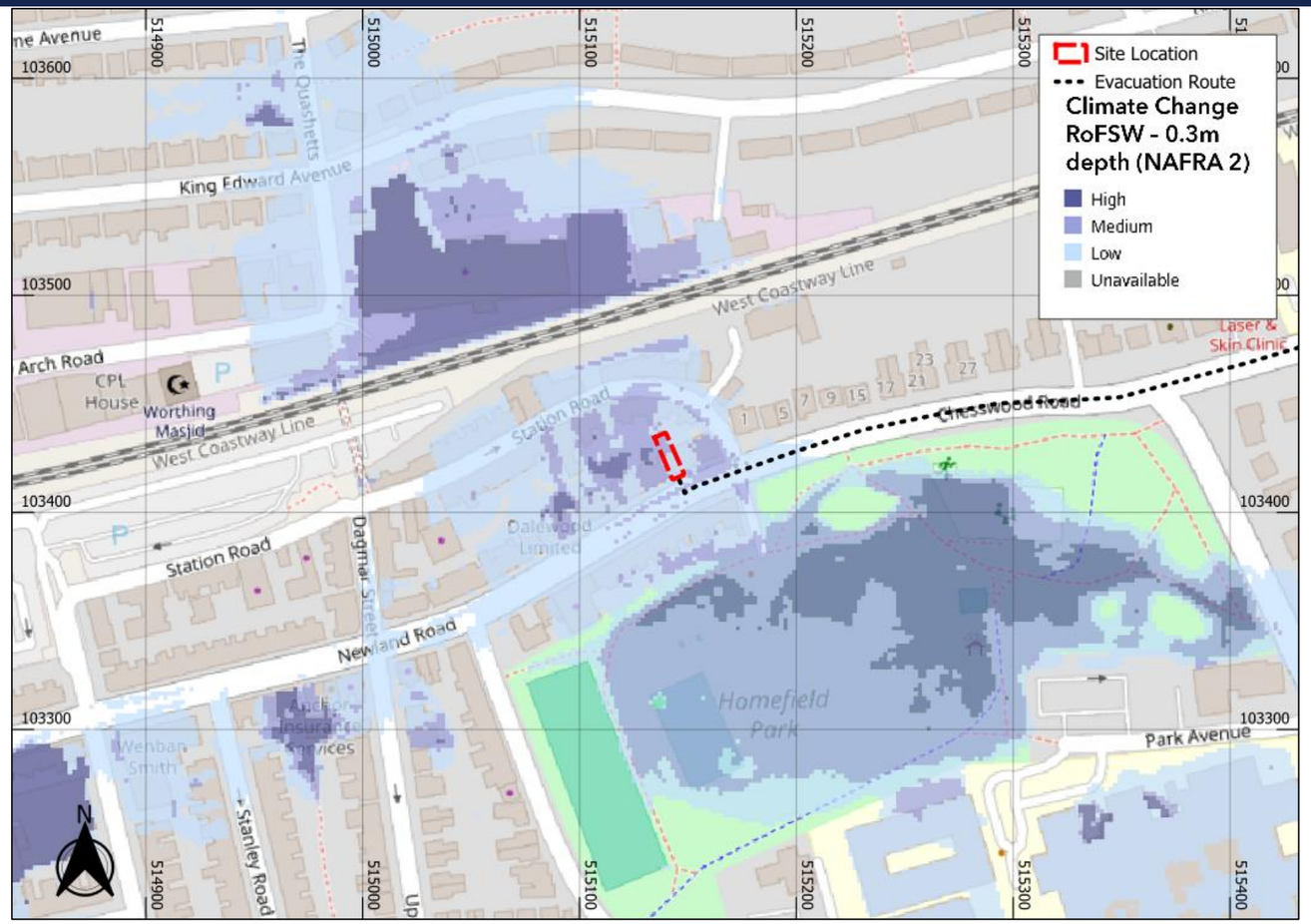
Flood warning actions:

Met Office Yellow Warning *You should check the details of the forecast.*	You should check the details of the forecast and consider taking steps to minimise impacts for you and your household. This can include moving important or sentimental items to a higher location and ensuring your flood kit is up-to-date in case evacuation is necessary. Be prepared to evacuate if required.
Met Office Amber Warning *Take Action*	Continue to monitor the forecast. Turn off power, gas and water if safe to do so. Grab your flood kit. If flooding has not already occurred, evacuate your property following the route indicated to a safe area. Do not wait for a severe warning to act, evacuated your property following the agreed evacuation route. Exit the site onto Newland Road and travel east. This route should be used by residents unless advised otherwise by emergency flood responders.
Met Office Red Warning *Severe flooding with danger to life*	If flooding has not yet occurred and you have yet to evacuate, you should evacuate your property following the route indicated if safe to do so. Floodwater can be dangerous, not only hide trip and fall hazards. Do not attempt to walk through floodwater - if the evacuation route is flooded, remain within your property and seek assistance from emergency services. Follow the advice of emergency flood responders.

The emergency services (blue light responders) become the first responders during a flood event. The instruction they give should be followed at all times, even if it contradicts the details of this FEP report.

Residents should monitor the following:
The Met Office Weather Warnings
https://www.metoffice.gov.uk/weather/warnings-and-advice/uk-warnings

Recommended evacuation route:



Seek prior evacuation as soon as a Flood Warning is issued. If flooding has already occurred, do not attempt to walk through floodwater, seek refuge on an first floor of the building.

IN AN EMERGENCY, CALL 999.

Emergency Contacts:		**Emergency cut-off locations:**	
Electricity provider:		**Electricity cut-off location:**	
Gas provider:		**Gas cut-off location:**	
Water Company:		**Water cut-off location:**	
Insurance Company:		**Insurance policy number:**	
Managing Agent:		**Location of Flood Kit:**	